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Cadet research program brings 14 to WPAFB

by Jill Bohn, AFRL Public Affairs

WRIGHT-PATTERSON AFB, Ohio — They represent the top of their class at the Air Force Academy - the best their major has to offer. The 14 cadets here at Wright-Patterson Air Force Base this summer have earned the right to participate in the Cadet Summer Research Program (CSRP). These cadets are the future of the Air Force.

For nearly 10 years now, CSRP has allowed for cadets between their junior and senior years to apply classroom skills to real-world work environments. The program places cadets within organizations worldwide that highlight their particular career focus. From there, they are assigned to specific projects and paired with mentors for approximately a six-week period.

While they have zeroed in on different courses of study, Cadets Matthew Booth and Sarah Hoffmeier both have aspirations of becoming pilots. They have been assigned to the Air Force Research Laboratory, Air Vehicles Directorate, Control Theory Optimization Branch.

"The program allows us to spend more time and dedicate more energy to a project, while working alongside professionals and specialists in the field," said Hoffmeier, an Engineering Sciences major from Northville, Mich. Under the mentorship of Dr. Ram Venkataraman, she has developed a computer model to control the NASA X-33 space plane during re-entry. AFRL is currently developing a complete set of control methods for the X-33 from takeoff to landing.

"It's an immersion program," said Cadet Matthew Booth, who is working under the supervision of William Blake. "At first it seemed like a lot of the information was going to be over our heads, but we're catching up quick."

Blake, who has sponsored the program for the past four years, said it's a real benefit to have extra people in the lab to work on a variety of projects. He personally enjoys seeing the progress made by the individual cadets during their stay.

During Booth's tenure at the laboratory, he has developed a computer model of a new transport design in support of the Cooperative Research and Development Agreement for Advanced Theatre Transport. This fall, results from his work will be included in a piloted simulation of the commercial design in the VA directorate's large motion based simulator.

Additionally, Booth, an Aeronautical Engineering major from Omaha, Neb., reduced and analyzed an Air Force/Army subsonic wind tunnel database on lattice control surfaces, an innovative missile control concept.

"It's been a real eye-opener from our prospective to see how everything we've learned in the classroom is being applied to these projects," Booth said.

Cadet Yancey Walker, a management major from San Antonio, Texas, has been assigned to the AFRL XPZ branch. XPZ is the Modeling and Analysis branch for Headquarters' Plans and Programs directorate. While he sets his sights on a career in hospital administration, he sees this opportunity as good exposure to leadership.

Led in this program by Major Bob Bolha, Walker has been given the chance to work with the Prototype for Planning Budgeting System (PPBS), a software designed to compile financial statistics. PPBS is currently in its testing phase.

Due to his success with the prototype and other projects, Walker has been assigned to provide a hands-on analysis of the overall structure within XP. According to Bolha, they look forward to his unique perspective on the assignment.

"It will really work to his advantage to go back to the academy and apply some of the skills he's been using here," Bolha said. "Cadet Walker will have a big leg up on the folks that don't have his opportunity."

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Walker said seeing the various stages of the project have made him realize that “you have to be well versed in more areas than simply management.” “I think it’s been important to get a real picture of the Air Force. This is real stuff, with real money and real problems,” he said.

Other students participating in CSRP at Wright-Patterson AFB and the locations at which they studied are: Air Force Research Laboratory - Cadets Antoine McNeal and David Mather, Sensors Directorate; Cadet Scott McCusker, Materials and Manufacturing Directorate; Cadets Paul Calhoun, Nathan Loucks, Matthew Rabe and Dick Janssen, Propulsion Directorate; Cadet Elliott Leigh, Air Vehicles Directorate; and Mark Fogel, Human Effectiveness Directorate; Aeronautical Systems Command - Cadet Aaron Celusta, Reconnaissance SPO; and Air Force Materiel Command - Cadet Robert Barnes, Civil Engineering.

With the success of the program, coordinators are continually trying to add additional sites to accommodate more cadets. For information on sponsoring a cadet for next year’s program, contact Capt. Mike Haynie at the Air Force Academy, 717-333-8387. @